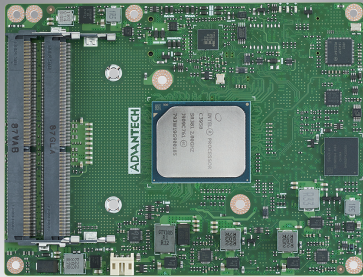


SOM-5962

Intel® Atom™ C3000 Processor COM Express R3.0 Type 7 Module

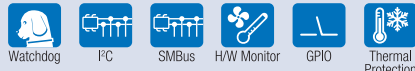
NEW



Features

- Intel® Atom™ C3000 processor
- COM Express R3.0 basic module Type 7 pin out
- 2~16 core processors, with max. TDP 31W
- Dual-CH DDR4 2400 w/ECC, max. 128GB
- High speed Ethernet (4 10GBASE-KR interfaces, one GbE)
- Abundant expansion: (3 PCIe x4, 1 GbE, 2 SATA 3.0, 4 USB 3.0)
- Supports iManager, embedded software APIs and Wise-PaaS/RMM

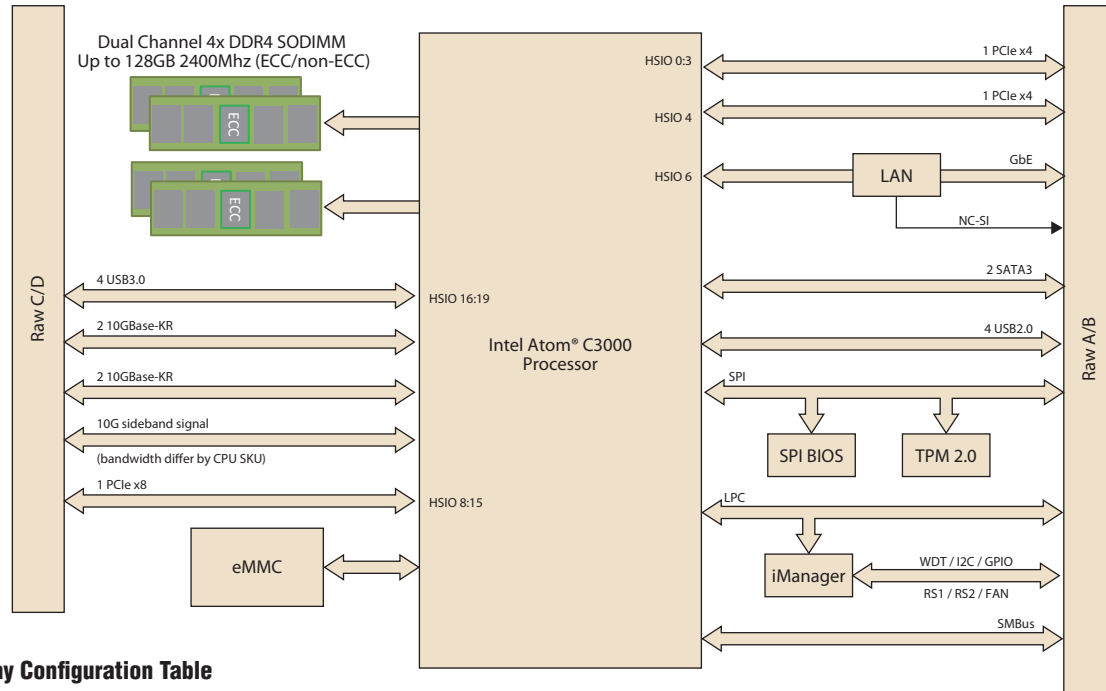
Software APIs:



Specifications

| | | | | | | | | | |
|------------------|--------------------------|---|----------|----------|----------|----------|----------|----------|----------|
| Form Factor | Form Factor | COM Express Basic Module | | | | | | | |
| | Pin-out Type | COM Express R3.0 Type 7 compatible | | | | | | | |
| Processor System | CPU | C3958 | C3758 | C3558 | C3338 | C3808 | C3708 | C3508 | C3308 |
| | Base Frequency | 2.0GHz | 2.2GHz | 2.2GHz | 1.5GHz | 2.0GHz | 1.7GHz | 1.6 GHz | 1.6GHz |
| | Max Turbo Frequency | 2.0GHz | 2.2GHz | 2.2GHz | 2.2GHz | 2.0GHz | 1.7GHz | 1.6 GHz | 2.1GHz |
| | Cores | 16 | 8 | 4 | 2 | 12 | 8 | 4 | 2 |
| | LLC | 16MB | 16MB | 8MB | 4MB | 12MB | 16MB | 8MB | 4MB |
| | CPU TDP | 31W | 25W | 16W | 8.5W | 25W | 17W | 11.5W | 9.5W |
| Memory | Technology | DDR4 1600/1866/2133/2400MHz | | | | | | | |
| | Max. Frequency | 2400 MHz | 2400 MHz | 2133 MHz | 1866 MHz | 2133 MHz | 2133 MHz | 1866 MHz | 1866 MHz |
| | ECC Support | ECC and non-ECC | | | | | | | |
| | Max. Capacity | 128GB | | | | | | | |
| | Socket | 4pcs 260P SO-DIMM, Dual Channel (2pcs rugged SODIMM) | | | | | | | |
| Expansion | PCI Express | 1 PCIe gen3 x8, bifurcatable to 2 x4, 4 x2. 1 PCIe gen3 x4, bifurcatable to 2 x2 (up to 2 PCIe x8 by option) Note: Depending on SoC HSI0 lanes | | | | | | | |
| | LPC | Yes 24MHz | | | | | | | |
| Serial Bus | SMBus | Yes | | | | | | | |
| | I²C Bus | Yes | | | | | | | |
| Ethernet | 10GB Ethernet | Intel integrated 4 x 10G LAN controller; Interface: 10GBase-KR | | | | | | | |
| | Gigabit | Intel I210AT/I210IT controller; Speed: 10/100/1000 Mbps | | | | | | | |
| I/O | SATA3.0 | 2 x ports | | | | | | | |
| | USB3.0 | 4 x ports Note: Depending on SoC HSI0 lanes | | | | | | | |
| | USB2.0 | 4 x ports | | | | | | | |
| | SPI Bus | Yes | | | | | | | |
| | GPIO | 8-bit | | | | | | | |
| | Watchdog | 65536 level, 0 ~ 65535 sec | | | | | | | |
| | COM Port | 2 Ports (2-Wire) | | | | | | | |
| | TPM | TPM2.0 | | | | | | | |
| | Smart Fan | 2 x ports: 1 port on COM module (notice: the input voltage of fan is aligned to Vin); 1 port on carrier board | | | | | | | |
| | Onboard storage | Up to 64GB eMMC | | | | | | | |
| Power | Type | ATX: Vin, VSB, AT: Vin | | | | | | | |
| | Supply Voltage | Vin: 8.5 (9-5%) ~ 20V (19+5%), VSB: 5V±5%, RTC Battery: 2.0-3.3V | | | | | | | |
| | Power Consumption (Max.) | 32.6 Watt | | | | | | | |
| | Power Consumption (Idle) | 11.8 Watt | | | | | | | |
| Environment | Operating Temperature | Standard: 0 ~ 60 °C (32 ~ 140 °F), Extend: -40 ~ 85 °C (-40 ~ 185 °F) | | | | | | | |
| | Storage Temperature | -40 ~ 85 °C (-40 ~ 185 °F) | | | | | | | |
| | Humidity | Operating: 40° C @ 95% relative humidity, non-condensing Storage: 60° C @ 95%relative humidity, non-condensing | | | | | | | |
| | Vibration Resistance | 3.5 Grms | | | | | | | |
| Mechanical | Dimensions | 125 mm x 95 mm (4.92" x 3.74") | | | | | | | |

Block Diagram



*Display Configuration Table

| HSIO Configuration Table | PClex4 | PCle x1 | PClex8 | LAN | SATA 3.0 | USB 3.0 |
|--------------------------|--------|---------|--------|-----|----------|---------|
| HSIO 20 (Default) | 1 | 1 | 1 | 1 | 2 | 4 |
| HSIO 20 (Optional) | 2/0 | 0 | 1/2 | 0 | 2 | 2 |
| HSIO 12 | 1 | 2 | 0 | 1 | 2 | 2 |
| HSIO 10 | 1 | 0 | 0 | 1 | 2 | 2 |

Ordering Information

| Part No. | CPU | Core | Base Freq. | Max. Boost Freq. | LLC | CPU TDP | Memory Channel | DDR4 SODIMM | eMMC | HSIO port | 10GBase-KR | | Thermal solution | Operating Temp. |
|-------------------|-------|------|------------|------------------|------|---------|----------------|-------------|------|-----------|----------------|----------------|------------------|-----------------|
| | | | | | | | | | | | LAN0 (Gbps) | LAN1 (Gbps) | | |
| SOM-5962C16-U0A1 | C3958 | 16 | 2GHz | 2GHz | 16MB | 31W | 2 | 2400 | 64GB | 20 | 10 2.5 1 | 10 2.5 1 | Active | 0 ~ 60 °C |
| SOM-5962C8-U2A1 | C3758 | 8 | 2.2GHz | 2.2GHz | 16MB | 25W | 2 | 2400 | 64GB | 20 | 10 2.5 1 | 10 2.5 1 | Active | 0 ~ 60 °C |
| SOM-5962C4-U2A1 | C3558 | 4 | 2.2GHz | 2.2GHz | 8MB | 16W | 2 | 2133 | 64GB | 12 | 2.5 1 | 2.5 1 | Active | 0 ~ 60 °C |
| SOM-5962C2-SSA1 | C3338 | 2 | 1.5GHz | 2.2GHz | 4MB | 8.5W | 1 | 1866 | 64GB | 10 | 2.5 1 | 2.5 1 | Active | 0 ~ 60 °C |
| SOM-5962C12X-U0A1 | C3808 | 12 | 2GHz | 2GHz | 12MB | 25W | 2 | 2133 | 64GB | 20 | 10 2.5 1 | 10 2.5 1 | Active | -40 ~ 85 °C |
| SOM-5962C8X-S7A1 | C3708 | 8 | 1.7GHz | 1.7GHz | 16MB | 17W | 2 | 2133 | 64GB | 20 | 2.5 1 | 2.5 1 | Active | -40 ~ 85 °C |
| SOM-5962C4X-S6A1 | C3508 | 4 | 1.6 GHz | 1.6 GHz | 8 MB | 11.5 W | 2 | 1866 | 64GB | 8 | 2.5 1 | 2.5 1 | Active | -40 ~ 85 °C |
| SOM-5962C2X-S6A1 | C3308 | 2 | 1.6GHz | 2.1GHz | 4MB | 9.5W | 1 | 1866 | N/A | 6 | 1 | 1 | Active | -40 ~ 85 °C |

Note: Any other SKU or combination has project-based support. Please contact sales for details.
Note2: LAN0 and LAN1 each support 2 port

Packing List

| Part No. | Description | Quantity |
|----------------|---------------------|----------|
| - | SOM-5962 COM module | 1 |
| 1970004431N001 | Heatspreader | 1 |

Optional Accessories

| Part No. | Description |
|--------------------|---|
| 196008918T001 | Semi-Cooler 125 x 95 x 33.5 mm with 12V Fan |
| SQR-YD4I32G2K6SEME | Rugged SODIMM DDR4 2666, 32GB ECC, i-grade |
| SQR-SD4N8G2K6SNBCB | SODIMM DDR4 2666, 8GB non-ECC |
| AQD-SD4U16N26-SE | SODIMM DDR4 2666, 16GB non-ECC |
| SQR-SD4N32G2K6SNME | SODIMM DDR4 2666, 32GB non-ECC |
| AQD-SD4U8GE24-SE | SODIMM DDR4 2400, 8GB ECC |
| SQR-SD4N32G2K6SEME | SODIMM DDR4 2666, 32GB ECC |

Development Board

| Part No. | Description |
|-----------------|--|
| SOM-DB5920-01A1 | COM Express Development Board for T7 Pin-out, support 10GBASE-T (4 port) |
| SOM-DB5920-F1A1 | COM Express Development Board for T7 Pin-out, support SFP+ I/O (4 port) |

Embedded OS

| OS License | Part No. | Description |
|-----------------------------|------------|--|
| Standard version for Server | 968QS16S16 | WinSvrEmb Std 2016 x64 ORY 16Core MUI |
| Standard version for Server | 968QS16S5C | WinSvrEmb Std 2016 x64 ORY 16Core SCAL MUI |